



August 25, 2016

Tom Moe USS Corporation P.O. Box 417 8771 Park Ridge Dr Mountain Iron, MN 55768

RE: Project: NPDES-TB Wk3
Pace Project No.: 1272915

Dear Tom Moe:

Enclosed are the analytical results for sample(s) received by the laboratory on August 17, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Melisa M Woods

Massia Wirds

melisa.woods@pacelabs.com

Project Manager

Enclosures

cc: Cory Hertling Terri Sabetti, NTS



315 Chestnut Street Virginia, MN 55792 (218) 742-1042



CERTIFICATIONS

Project: NPDES-TB Wk3

Pace Project No.: 1272915

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792

Alaska Certification #MN01084

Arizona Department of Health Certification #AZ0785

Minnesota Dept of Health Certification #: 027-137-445

North Dakota Certification: # R-203

Wisconsin DNR Certification #: 998027470 WA Department of Ecology Lab ID# C1007

Nevada DNR #MN010842015-1

Oklahoma Department of Environmental Quality

Duluth Minnesota Cerification ID's

4730 Oneota St., Duluth, MN 55807

Minnesota Dept of Health Certification #: 027-137-152

Wisconsin DNR Certification #: 999446800

North Dakota Certification #: R-105





SAMPLE SUMMARY

Project: NPDES-TB Wk3

Pace Project No.: 1272915

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1272915001	SD 001 (Seep 020)	Water	08/17/16 10:45	08/17/16 13:40





SAMPLE ANALYTE COUNT

Project: NPDES-TB Wk3

Pace Project No.: 1272915

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
1272915001	SD 001 (Seep 020)	EPA 1664A TPH (1999)	DES	1	PASI-DUL
		USGS I-3765	BEM	1	PASI-V



ANALYTICAL RESULTS

Project: NPDES-TB Wk3

Pace Project No.: 1272915

Date: 08/25/2016 03:44 PM

Sample: SD 001 (Seep 020)	Lab ID:	1272915001	Collecte	d: 08/17/16	10:45	Received: 08/	trix: Water		
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical	Method: EPA	1664A TPH	(1999)			-		
Total Petroleum Hydrocarbons	ND	mg/L	3.0	1.0	1		08/23/16 16:05		
USGS I-3765 TSS	Analytical	Method: USG	S I-3765						
Total Suspended Solids	4.4	mg/L	1.0	1.0	1		08/23/16 12:57		



QUALITY CONTROL DATA

Project:

NPDES-TB Wk3

Pace Project No.:

1272915

QC Batch:

91925

QC Batch Method:

1272915001

EPA 1664A TPH (1999)

Analysis Method:

EPA 1664A TPH (1999)

Analysis Description:

ND

1664 SGT-HEM, TPH

Associated Lab Samples: METHOD BLANK: 361428

Total Petroleum Hydrocarbons

Matrix: Water

Associated Lab Samples:

1272915001

Blank

Reporting

Parameter Units Result

Limit

3.0

MDL

1.0

Qualifiers Analyzed

08/23/16 12:04

LABORATORY CONTROL SAMPLE:

Parameter

Parameter

Spike Conc.

LCS Result

LCS % Rec % Rec Limits

Qualifiers

Total Petroleum Hydrocarbons

mg/L

Units

mg/L

mg/L

1273036001

20

Spike Conc.

17.5

MS Result MS

64-132

% Rec

Qualifiers

MATRIX SPIKE SAMPLE:

Date: 08/25/2016 03:44 PM

Total Petroleum Hydrocarbons

361430

Units

Result 2.0J

21.5

21.4

88

% Rec 90 Limits

64-132

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL DATA

Project: NPDES-TB Wk3

Pace Project No.: 1272915

Associated Lab Samples:

QC Batch: 91959

QC Batch Method: USGS I-3765

1272915001

Analysis Method: USGS I-3765

USGS I-3765 Total Suspended Solids

METHOD BLANK: 361557 Matrix: Water

Associated Lab Samples: 1272915001

ParameterUnitsBlank Reporting ResultReporting LimitMDLAnalyzedQualifiersTotal Suspended Solidsmg/LND1.01.008/23/16 12:57

Analysis Description:

LABORATORY CONTROL SAMPLE: 361558

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers **Total Suspended Solids** mg/L 239 236 99 80-120

SAMPLE DUPLICATE: 361559

1273078001 Dup Max **RPD RPD** Parameter Units Result Result Qualifiers 92.0 4 10 Total Suspended Solids 96.0 mg/L

SAMPLE DUPLICATE: 361560

Date: 08/25/2016 03:44 PM

ParameterUnits1273066001 ResultDup ResultRPDMax RPDQualifiersTotal Suspended Solidsmg/L138132410

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: NPDES-TB Wk3
Pace Project No.: 1272915

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

Date: 08/25/2016 03:44 PM

PASI-DUL Pace Analytical Services - Duluth
PASI-V Pace Analytical Services - Virginia



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NPDES-TB Wk3

Pace Project No.: 1272915

Date: 08/25/2016 03:44 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
1272915001	SD 001 (Seep 020)	EPA 1664A TPH (1999)	91925		,
1272915001	SD 001 (Seep 020)	USGS I-3765	91959		

on on 8 9 Mt. Iran, MN 55768 4 Requested Due Date: Address Required Client Information: 2 ü ITEM# SD 001 (Seep 020) USS Corporation P.O. Box 417 Sample ids must be unique One Character per box. SAMPLE ID ADDITIONAL COMMENTS (A.Z, 0-9/, -) Fax MATRIX
Drinking Water
Water
Water
Water
Product
Soil/Soild
Oil
Wipe
Air
Cther
Tissue Section B
Required Project Information: Report To: Tom Moe Project Name: Сору То: urchase Order #: IN O WE USE OF SECO Cococ RELINQUISHED BY LAFFILIATION MATRIX CODE (see valid codes to left) ≨ SAMPLE TYPE (G=GRAB C=COMP) NPDES-TB Wk3 9/[17/16 START Benson SHIO SAMPLER NAME AND SIGNATURE COLLECTED SIGNATURE of SAMPLER: PRINT Name of SAMPLER: 9/11/3 CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields my the chain-of-Custody is a LEGAL DOCUMENT. Ð 10:45 9/17/16 DATE SAMPLE TEMP AT COLLECTION Section C Invoice Informatic Address: 3:40 # OF CONTAINERS Pace Profile #: Pace Project Manage Company Name: Attention: Pace Quote: Unpreserved 198c H2SO4 ниоз Preservatives PM MMW USS CORP HCI NaOH Senson ACCEPTED BY / AFFILIATION Na2\$2O3 Methano! Other Y/N **Analyses Test** × TSS DATE Signed: TRPH 1664 9110118 8-17-10-5:40 0 TEMP in C State / Location Residual Chlorine (Y/N) Received on SAMPLE CONDITIONS ice (Y/N) Custody Sealed ζ 으 Cooler (Y/N) Samples Intact (Y/N)

Pace Analytical*

Document Name: Sample Condition Upon Receipt Form

Document No.: F-VIM-C-003-Rev.09 Document Revised: 23Feb ⊋015

Page 1 of 1 Issuing Authority:

Pace Virginia, Minnesota Quali ty Office

Semile Chillian Client Name:	Pro		1:1127291	and of the same and the same of the same o
	USPS Siction	nt 1272		
Tracking Number:			The second secon	
Custody Seal on Cooler/Box Present? Yes	No Seals Intac	:1? \X Yes	Optional: Proj. Due Da	te: Proj. Name:
Packing Material: Bubble Wrap Bubble	e Bags None X Oi	her:	Temp Blank?	Xyes No
hermometer Used: X 140792808	Type of Ice: Wei	t 🗌 Blue 📗	None Samples on ice, co	oli ng process has begun
Cooler Temp Read °C: 1.0 Cooler Tempshould be above freezing to 6°C Correction	np Corrected °C; <u>0,3</u> Facto n <u>f</u> 0. Da	ne and Initials of Pr	Biological Tissue Frozen? erson Examining Contents: Comments:	Yes No You
Chain of Custody Present?	Yes DNO []N/A 1.		
Chain of Custody Filled Out?]N/A 2.		
Chain of Custody Relinquished?	Xes. No]N/A 3.		
Sampler Name and Signature on COC?	XYes No []N/A 4.		
Samples Arrived within Hold Time?	Des no]n/a 5.		
Short Hold Time Analysis (<72 hr)?.	□Yes. • No □]N/A 6.		
Rush Turn Around Time Requested?	□Yes 🗀 🗆]N/A 7.		
Sufficient Volume?	'QYes No []N/A 8.		
Correct Containers Used?	∑Kes □No □]N/A 9.		
-Pace Containers Used?	<u>-</u>] A/A		
Containers Intact?]N/A 10.		
Filtered Volume Received for Dissolved Tests?		· · · · · · · · · · · · · · · · · · ·	sediment is visible in the dissolve	d Containers
Sample Labels Match COC?	· _ / _ /]N/A 12.		
-Includes Date/Time/ID/Analysis Matrix:	NT	1,4		
All containers needing acid/base preservation will be checked and documented in the pH logbook.	□Yes \$\$\text{\$\ext{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\ext{\$\ext{\$\ext{\$\text{\$\exitt{\$\ext{\$\exitting{\$\ext{\$\exititt{\$\ext{\$\ext{\$\exititt{\$\exititt{\$\exitt{\$\ext{\$\exititt{\$\ext{\$\exitititt{\$\exititt{\$\exitititt{\$\exititt{\$\exititt{\$\exititt{\$\exi	See pH lo documer	og for results and addition ntation	on al preservation
Headspace in Methyl Mercury-Container	Yes No -	3N/A 13.		
leadspace in VOA Vials (>6mm)?	Yes No	M/A 14.		
rip Blank Present?		₩(A 15.		
rip Blank Custody Seals Present?		MA		
ace Trip Blank Lot # (if purchased):				
IENT NOTICE ATION/DECOLUTION			61.110	
ENT NOTIFICATION/RESOLUTION		m , J==-	Field Data Required?	YesNo
		Date/Time:		
Comments/Resolution:				

FECAL WAIVER ON FILE Y N

TEMPERATURE WAIVER ON FILE Y

Project Manager Review: 4 Date: 8/17/16

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office age 11 8 13

hold, incorrect preservative, out of temp, incorrect containers)

Intra-Regional Chain of Custody



Wo	rkorde	r: 1272915	Workorde	Name: NPDES	-TB Wk3					Ov	vner	Red	ceiv	ed [Date	: 8/	17/2	016		D	ue C	ate	: 8/3	31/20	116
Rec	eived at:			Send To La	ab:												Requ	este	d An	alysi	s				
315 Virg Pho	Chestn inia, Mi	tical Virginia ut Street N 55792 N 742-1042		4730 One Duluth, N	alytical Duluth eota Street IN 55807 18) 727-6380								1664 TPH												
Mel	isa M W	loods					P	rese	rved	Conf	laine	rs	Į į		1	i	ļ	ł	1			i			
ltem	Sampl	e ID	Sampl Type	e Collect Date/Time	Lab ID	Matrix	ŦĢ.												i i						LAB USE ONLY
1	SD 001	(S ee p 020)	PS	8/17/2016 10:45	1272915001	Water	d						X			L			L		<u> </u>				
2												_	ļ								<u> </u>	↓	╄		
3											<u> </u>			<u> </u>		L	<u> </u>			<u> </u>	<u> </u>		\perp		
4	Ĺ							<u> </u>					<u> </u>				<u> </u>				1_	$oldsymbol{\perp}$			
5												<u> </u>	<u> </u>	<u> </u>		<u> </u>	L		<u> </u>	<u> </u>	<u> </u>	<u> </u>	1		
<u> </u>	_	1	- · · · · · · ·	1	1									-							Com	ment	S		· · · · · · · · · · · · · · · · · · ·
	sfers	Released By		Date/Time	Received (e/Tim		┨.	_										
1				\$/18/14(10 Kust	wa Po	ls	01	1		RIF	<u>8111</u>	ی ا	233)										
2								-			├			4											
3			0.0								-	_		-											
4		<u> </u>	3.2	She make				- 1			<u> </u>								П				. 14	7	V 11
Coc	ler Ter	nperature on l	Receipt -	_°C Cu	stody Seal (Y)or N	l		F	Rece	eive	<u>d or</u>	ı ice	<u> </u>	<u>() oı</u>	r N	<u> </u>				sam	pie	s int	act	Y)or N

^{***}In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

		Doc	• Mams		Document Povised 221222016
	Sample Co	Documen Indition U		pt Form	Document Revised: 22Jan2016 Page 1 of 1
Pace Analytical *		Docume	·		Issuing Authority:
L/	F-	DUL-C-00	1-Rev.01		Pace Virginia, Minnesota Quality Office
Sample Condition Client Name: Upon Receipt			Project #:		
IR-COC from	1 Virqu	N'Q_			
Courier: ☐Fed Ex ☐UPS ☐Commercial ★Pace	□usPs □Other:	CI	lient		
Tracking Number:					
Custody Seal on Cooler/Box Present? Yes	□No	Seals In	tact?	Yes □N	Optional: Proj. Due Date: Proj. Name:
Packing Material: Bubble Wrap Bubb	ole Bags No	one [Other:	· · · · · · · · · · · · · · · · · · ·	Temp Blank?
Thermometer Used: B00051	Type of I	ce: 🔎	Wet [Blue	None Samples on ice, cooling process has begu
Cooler Temp Read °C: 4.0 Cooler Temp should be above freezing to 6°C Correction		_			\sim
					Comments:
Chain of Custody Present?	<u>Yes</u>	□ No	□N/A	1.	
Chain of Custody Filled Out?	Ves	□No —	□N/A	2.	
Chain of Custody Relinquished?	Yes	□No	□N/A	3.	
Sampler Name and Signature on COC?	□Yes	□No		4.	
Samples Arrived within Hold Time?	Yes	□No	□N/A	5.	
Short Hold Time Analysis (<72 hr)?	□Yes	∠X N∘	□n/A	6.	
Rush Turn Around Time Requested?	Yes	₩ No	□N/A	7.	
Sufficient Volume?	Yes	□No	N/A_	8.	
Correct Containers Used?	[Sec.	□No	□n/a	9.	•
-Pace Containers Used?	SQ0°5	No	□n/A		
Containers Intact?	∑ res	□No_	□n/A	10.	
Filtered Volume Received for Dissolved Tests?	☐Yes	□No	[Jay/A	11. Note if	sediment is visible in the dissolved containers.
Sample Labels Match COC?	∑ Yes	□No	□N/A	12.	
-Includes Date/Time/ID/Analysis Matrix:	<u> </u>				
All containers needing acid/base preservation will checked and documented in the pH logbook.	be Tyes	□No	[]]N/A	See pH l docume	og for results and additional preservatior ntation
Headspace in Methyl Mercury Container	□Yes	□No	DN/A	13.	
Headspace in VOA Vials (>6mm)?	□Yes	□No	ŮN/A	14.	
Trip Blank Present?	□Yes	□No	□N/A	15.	
Trip Blank Custody Seals Present?	∐Yes	□No	₽ N/A		
Pace Trip Blank Lot # (if purchased):					
CLIENT NOTIFICATION/RESOLUTION Person Contacted:			ĺ	Date/Time:	Field Data Required? Yes No
Comments/Resolution:					

FECAL WAIVER ON FILE Y N

TEMPERATURE WAIVER ON FILE

Y N

Project Manager Review:

LMF

Date: 8-19-16

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)